ABSTRACT OF THE DISCLOSURE

A metal coating is formed on the inside face of a first thermostructural composite material part presenting indentations forming channels, and also on the inside face of a second thermostructural composite material part for being applied against the inside face of the first part, and the first and second parts are assembled together by bonding said inside faces together by hot compression, in particular by hot isostatic pressing, thereby obtaining a thermostructural composite material cooling panel having integrated fluid flow channels. The invention is applicable to making heat exchanger walls such as the walls of combustion chambers in aircraft engines, or the diverging portions of rocket engines, or plasma confinement chambers in nuclear fusion reactors.